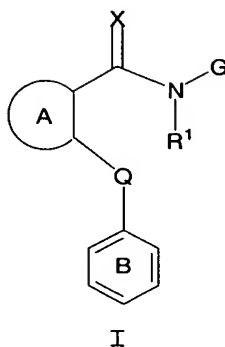


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We claim:

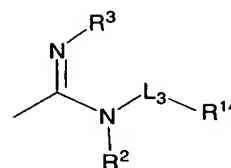
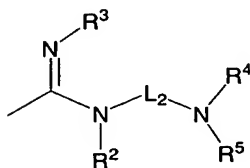
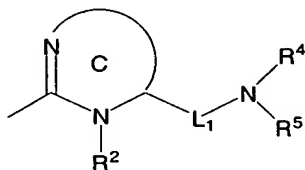
1. A compound of formula I:



or a pharmaceutically acceptable salt thereof, wherein:

X is oxygen or sulfur;

G is G1, G2 or G3:



Ring C of G1 is an optionally substituted 5-6 membered aromatic or non-aromatic ring having two or three ring nitrogens;

$L_1$  is a  $C_{1-6}$  alkylidene chain optionally substituted by 1-3  $R^6$ , wherein the alkylidene chain is optionally interrupted by  $-C(R^{11})_2-$ ,  $-C(R^{11})_2C(R^{11})_2-$ ,  $-C(R^{11})=C(R^{11})-$ ,  $-C\equiv C-$ ,  $-O-$ ,  $-S-$ ,  $-N(R^1)$ ,  $-N(R^{10})CO-$ ,  $-N(R^{10})CO_2-$ ,  $-CON(R^{10})-$ ,  $-C(R^{11})(OR^1)-$ ,  $-CO-$ ,  $-CO_2-$ ,  $-OC(=O)-$ ,  $-OC(=O)N(R^{10})-$ ,  $-SO-$ ,  $-SO_2-$ ,  $-N(R^{10})SO_2-$ , or  $-SO_2N(R^{10})-$ , and wherein  $L_1$  or a portion thereof optionally forms part of a 3-7 membered ring;

$L_2$  is a  $C_{2-6}$  alkylidene chain optionally substituted by 1-3  $R^6$ , wherein the alkylidene chain is optionally interrupted by

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- $-C(R^{11})_2-$ ,  $-C(R^{11})_2C(R^{11})_2-$ ,  $-C(R^{11})=C(R^{11})-$ ,  $-C\equiv C-$ ,  $-O-$ ,  $-S-$ ,  
 $-N(R^{11})_2-$ ,  $-N(R^{10})CO-$ ,  $-N(R^{10})CO_2-$ ,  $-CON(R^{10})-$ ,  $-C(R^{11})(OR^1)-$ ,  
 $-CO-$ ,  $-CO_2-$ ,  $-OC(=O)-$ ,  $-OC(=O)N(R^{10})-$ ,  $-SO-$ ,  $-SO_2-$ ,  $-$   
 $N(R^{10})SO_2-$  or  $-SO_2N(R^{10})-$ , and wherein  $L_2$  or a portion  
5 thereof optionally forms part of a 3-7 membered ring;  
 $L_3$  is a direct link, a  $C_{1-6}$  alkylidene chain optionally  
substituted by 1-3  $R^6$ , wherein the alkylidene chain is  
optionally interrupted by  $-C(R^{11})_2-$ ,  $-C(R^{11})_2C(R^{11})_2-$ ,  
 $-C(R^{11})=C(R^{11})-$ ,  $-C\equiv C-$ ,  $-O-$ ,  $-S-$ ,  $-N(R^{11})$ ,  $-N(R^{10})CO-$ ,  
10  $-N(R^{10})CO_2-$ ,  $-CON(R^{10})-$ ,  $-C(R^{11})(OR^1)-$ ,  $-CO-$ ,  $-CO_2-$ ,  
 $-OC(=O)-$ ,  $-OC(=O)N(R^{10})-$ ,  $-SO-$ ,  $-SO_2-$ ,  $-N(R^{10})SO_2-$ , or  
 $-SO_2N(R^{10})-$ , and wherein  $L_3$  or a portion thereof optionally  
forms part of a 3-7 membered ring;  
 $R^1$  is hydrogen or  $C_{1-6}$  aliphatic;  
15 each  $R^2$  is independently selected from hydrogen,  $C_{1-8}$   
aliphatic,  $C_{6-10}$  aryl,  $C_{7-10}$  aralkyl, or, when Ring C is a  
6-membered aromatic ring  $R^2$  is a lone electron pair;  
 $R^3$  is hydrogen,  $C_{1-8}$  aliphatic,  $C_{6-10}$  aryl, or  $C_{7-10}$  aralkyl;  
 $R^4$  is hydrogen,  $C_{1-8}$  aliphatic,  $C=O(C_{1-8}$  aliphatic),  $CO_2(C_{1-8}$   
20 aliphatic),  $C(=O)N(R^{10})(C_{1-7}$  aliphatic),  $C_{6-10}$  aryl,  
heteroaryl,  $C_{7-12}$  aralkyl, or heteroaralkyl;  
 $R^5$  is hydrogen or  $C_{1-8}$  aliphatic, or  $R^4$  and  $R^5$  taken together  
with their intervening nitrogen form a substituted or  
unsubstituted, aromatic or non-aromatic, 4-14 membered  
25 monocyclic, bicyclic or tricyclic ring system having, in  
addition to said intervening nitrogen, 0-4 ring  
heteroatoms selected from nitrogen, sulfur or oxygen;  
Ring A is a 5-membered heteroaryl ring or a 6-membered  
aromatic ring having 0-2 ring nitrogen atoms, wherein Q  
30 and  $C(=X)N(R^1)-G$  are attached at ortho positions on Ring A  
and wherein Ring A is optionally substituted by one to  
three  $R^7$ ;

Ring B is a 6-membered aromatic ring having 0-2 ring nitrogen atoms, wherein Ring B is optionally substituted by one or more R<sup>8</sup>;

Q is a C<sub>2</sub>-C<sub>4</sub> alkylidene chain optionally substituted by one to three R<sup>9</sup>, wherein a methylene unit of the alkylidene chain is optionally replaced by -S-, -S(O)-, -SO<sub>2</sub>-, -N(R<sup>1</sup>)-, -O-, -C(O)-, or -C(S)-;

each R<sup>6</sup> is independently selected from halo, -OR<sup>1</sup>, -CN, -C<sub>1-6</sub> aliphatic, -N(R<sup>10</sup>)<sub>2</sub>, -C=O(C<sub>1-5</sub> aliphatic), -CO<sub>2</sub>R<sup>1</sup>, -CH<sub>2</sub>CO<sub>2</sub>R<sup>1</sup>, or -C(=O)N(R<sup>10</sup>)(C<sub>1-5</sub> aliphatic);

each R<sup>7</sup> is independently selected from -halo, -NO<sub>2</sub>, -CN, or a substituted or unsubstituted group selected from -R<sup>12</sup>, -OR<sup>1</sup>, -SR<sup>12</sup>, -C<sub>6-10</sub> aryl, -heterocyclyl, -heteroaryl, -(C<sub>6-10</sub> aryl)alkyl, -(heterocyclyl)alkyl, -(heteroaryl)alkyl, -N(R<sup>10</sup>)<sub>2</sub>, -NR<sup>10</sup>C(O)R<sup>1</sup>, -NR<sup>10</sup>C(O)N(R<sup>10</sup>)<sub>2</sub>, -NR<sup>10</sup>CO<sub>2</sub>R<sup>12</sup>, -CO<sub>2</sub>R<sup>1</sup>, -C(O)R<sup>1</sup>, -C(O)N(R<sup>10</sup>)<sub>2</sub>, -OC(O)N(R<sup>10</sup>)<sub>2</sub>, -S(O)<sub>2</sub>R<sup>12</sup>, -SO<sub>2</sub>N(R<sup>10</sup>)<sub>2</sub>, -S(O)R<sup>12</sup>, -NR<sup>10</sup>SO<sub>2</sub>N(R<sup>10</sup>)<sub>2</sub>, -NR<sup>10</sup>SO<sub>2</sub>R<sup>12</sup>, or -C(=NH)-N(R<sup>10</sup>)<sub>2</sub>, or two adjacent R<sup>7</sup> taken together with their intervening atoms form a 5-6 membered unsaturated or partially unsaturated ring having 0-2 ring heteroatoms selected from nitrogen, oxygen or sulfur;

each R<sup>8</sup> is independently selected from -halo, -NO<sub>2</sub>, -CN, or a substituted or unsubstituted group selected from -R<sup>12</sup>, -OR<sup>1</sup>, -SR<sup>12</sup>, -C<sub>6-10</sub> aryl, -heterocyclyl, -heteroaryl, -(C<sub>6-10</sub> aryl)alkyl, -(heterocyclyl)alkyl, -(heteroaryl)alkyl, -N(R<sup>10</sup>)<sub>2</sub>, -NR<sup>10</sup>C(O)R<sup>1</sup>, -NR<sup>10</sup>C(O)N(R<sup>10</sup>)<sub>2</sub>, -NR<sup>10</sup>CO<sub>2</sub>R<sup>12</sup>, -CO<sub>2</sub>R<sup>1</sup>, -C(O)R<sup>1</sup>, -C(O)N(R<sup>10</sup>)<sub>2</sub>, -OC(O)N(R<sup>10</sup>)<sub>2</sub>, -S(O)<sub>2</sub>R<sup>12</sup>, -SO<sub>2</sub>N(R<sup>10</sup>)<sub>2</sub>, -S(O)R<sup>12</sup>, -NR<sup>10</sup>SO<sub>2</sub>N(R<sup>10</sup>)<sub>2</sub>, -NR<sup>10</sup>SO<sub>2</sub>R<sup>12</sup>, or -C(=NH)-N(R<sup>10</sup>)<sub>2</sub>, or two adjacent R<sup>8</sup> taken together with their intervening atoms form a 5-6 membered unsaturated or partially unsaturated ring having 0-2 ring heteroatoms selected from nitrogen, oxygen or sulfur;

each R<sup>9</sup> is independently selected from halo, OR<sup>1</sup>, CN, C<sub>1-6</sub> aliphatic, N(R<sup>10</sup>)<sub>2</sub>, C=O(C<sub>1-5</sub> aliphatic), CO<sub>2</sub>(C<sub>1-5</sub> aliphatic), or C(=O)N(R<sup>10</sup>)(C<sub>1-5</sub> aliphatic), or R<sup>9</sup> and an R<sup>7</sup>, at a position ortho to Q, are taken together with their intervening  
5 atoms form a 5-7 membered unsaturated or partially unsaturated ring having 0-2 ring heteroatoms selected from N, O or S;

each R<sup>10</sup> is independently selected from hydrogen, a substituted or unsubstituted C<sub>1-8</sub> aliphatic group, C(=O)R<sup>1</sup>,  
10 CO<sub>2</sub>R<sup>1</sup>, SO<sub>2</sub>R<sup>1</sup>, or two R<sup>10</sup> on the same nitrogen taken together with the nitrogen form a 5-8 membered aromatic or non-aromatic ring having, in addition to the nitrogen, 0-2 ring heteroatoms selected from N, O, or S;

each R<sup>11</sup> is independently selected from hydrogen, CO<sub>2</sub>R<sup>12</sup>,  
15 CON(R<sup>12</sup>)<sub>2</sub>, OR<sup>12</sup>, or a substituted or unsubstituted C<sub>1-8</sub> aliphatic group;

each R<sup>12</sup> is independently selected from a substituted or unsubstituted C<sub>1-8</sub> aliphatic group; and

R<sup>14</sup> is hydrogen, C<sub>1-8</sub> aliphatic, C<sub>6-10</sub> aryl, heteroaryl, C<sub>7-12</sub>  
20 aralkyl, heteroaralkyl, heterocyclyl, or R<sup>3</sup> and R<sup>14</sup> taken together with their intervening nitrogens form a substituted or unsubstituted, aromatic or non-aromatic, 4-14 membered monocyclic, bicyclic or tricyclic ring system having, in addition to said intervening nitrogen, 0-4 ring  
25 heteroatoms selected from nitrogen, sulfur or oxygen.

2. The compound of claim 1 wherein G is G1.

3. The compound of claim 2 having one or more features  
30 selected from the group consisting of:

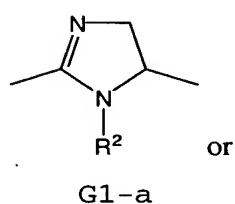
(a) X is oxygen;

(b) L<sub>1</sub> is a C<sub>2-3</sub> alkylidene chain;

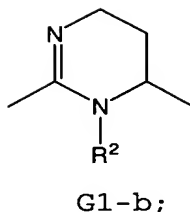
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(c) Q is  $-\text{CH}_2\text{CH}_2-$ ;

(d) G1 is G1-a or G1-b:



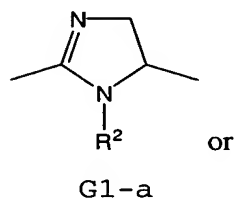
or



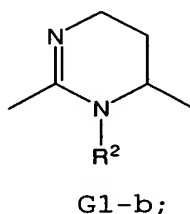
- 5 (e)  $\text{R}^4$  and  $\text{R}^5$  are each independently selected from a  $\text{C}_{1-4}$  aliphatic group or  $\text{R}^4$  and  $\text{R}^5$  taken together with their intervening nitrogen form a 5-6 membered ring;
- (f) Ring A is an optionally substituted phenyl or thienyl; and
- 10 (g) Ring B is a substituted phenyl or naphthyl.

4. The compound of claim 3 wherein:

- (a) X is oxygen;
- (b)  $\text{L}_1$  is a  $\text{C}_{2-3}$  alkylidene chain;
- 15 (c) Q is  $-\text{CH}_2\text{CH}_2-$ ;
- (d) G1 is G1-a or G1-b:



or



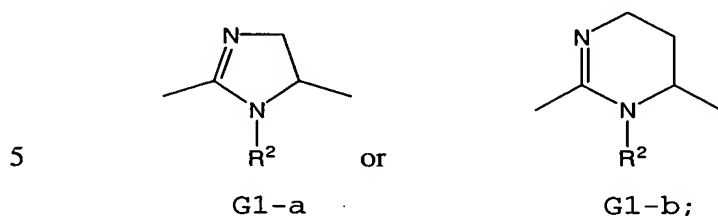
- (e)  $\text{R}^4$  and  $\text{R}^5$  are each independently selected from a  $\text{C}_{1-4}$  aliphatic group or  $\text{R}^4$  and  $\text{R}^5$  taken together with their intervening nitrogen form a 5-6 membered ring;
- 20 (f) Ring A is an optionally substituted phenyl or thienyl; and
- (g) Ring B is a substituted phenyl or naphthyl.

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5. The compound of claim 2 having one or more features selected from the group consisting of:

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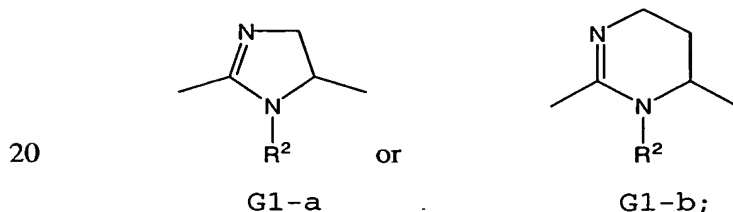
- (a) X is oxygen;  
 (b) L<sub>1</sub> is -CH<sub>2</sub>CH<sub>2</sub>- or -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>-;  
 (c) Q is -CH<sub>2</sub>CH<sub>2</sub>-;  
 (d) G1 is G1-a or G1-b:



- (e) R<sup>4</sup> and R<sup>5</sup> are each independently selected from a C<sub>1-3</sub> aliphatic group or R<sup>4</sup> and R<sup>5</sup> taken together with their intervening nitrogen form a piperidinyl, pyrrolidinyl, piperazinyl or morpholinyl ring;  
 10 (f) Ring A is an optionally substituted phenyl or thienyl;  
 and  
 (g) Ring B is a substituted phenyl or naphthyl.

15 6. The compound of claim 2 wherein:

- (a) X is oxygen;  
 (b) L<sub>1</sub> is -CH<sub>2</sub>CH<sub>2</sub>- or -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>-;  
 (c) Q is -CH<sub>2</sub>CH<sub>2</sub>-;  
 (d) G1 is G1-a or G1-b:



- (e) R<sup>4</sup> and R<sup>5</sup> are each independently selected from a C<sub>1-3</sub> aliphatic group or R<sup>4</sup> and R<sup>5</sup> taken together with their intervening nitrogen form a piperidinyl, pyrrolidinyl, piperazinyl or morpholinyl ring;  
 25 (f) Ring A is an optionally substituted phenyl or thienyl;  
 and

(g) Ring B is a substituted phenyl or naphthyl.

7. The compound of claim 1 wherein G is G2.

5 8. The compound of claim 7 having one or more features selected from the group consisting of:

(a) X is oxygen;

(b) L<sub>2</sub> is a C<sub>3-4</sub> alkylidene chain;

(c) Q is -CH<sub>2</sub>CH<sub>2</sub>-;

10 (d) (i) R<sup>4</sup> and R<sup>5</sup> are each independently selected from a C<sub>1-4</sub> aliphatic group, or (ii) R<sup>4</sup> and R<sup>5</sup> taken together with their intervening nitrogen form a 5-6 membered ring, or (iii) R<sup>5</sup> is a C<sub>1-4</sub> aliphatic group and R<sup>4</sup> is aryl, aralkyl, heteroaryl, or heteroaralkyl;

15 (e) Ring A is an optionally substituted phenyl or thienyl; and

(f) Ring B is a substituted phenyl or naphthyl.

9. The compound of claim 7 wherein:

20 (a) X is oxygen;

(b) L<sub>2</sub> is a C<sub>3-4</sub> alkylidene chain;

(c) Q is -CH<sub>2</sub>CH<sub>2</sub>-;

(d) (i) R<sup>4</sup> and R<sup>5</sup> are each independently selected from a C<sub>1-4</sub> aliphatic group, or (ii) R<sup>4</sup> and R<sup>5</sup> taken together with  
25 their intervening nitrogen form a 5-6 membered ring, or (iii) R<sup>5</sup> is a C<sub>1-4</sub> aliphatic group and R<sup>4</sup> is aryl, aralkyl, heteroaryl, or heteroaralkyl;

(e) Ring A is phenyl or thienyl; and

(f) Ring B is phenyl or naphthyl.

30

10. The compound of claim 7 having one or more features selected from the group consisting of:

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- (a) X is oxygen;
- (b) L<sub>2</sub> is -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>- or -CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>2</sub>-;
- (c) Q is -CH<sub>2</sub>CH<sub>2</sub>-;
- (d) R<sup>4</sup> and R<sup>5</sup> are each independently selected from a C<sub>1-3</sub>  
5 aliphatic group or R<sup>4</sup> and R<sup>5</sup> taken together with their  
intervening nitrogen form a piperidinyl, pyrrolidinyl,  
piperazinyl or morpholinyl ring;
- (e) Ring A is an optionally substituted phenyl or thienyl;  
and
- 10 (f) Ring B is a substituted phenyl or naphthyl.

11. The compound of claim 7 wherein:

- (a) X is oxygen;
- (b) L<sub>2</sub> is -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>- or -CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>2</sub>-;
- 15 (c) Q is -CH<sub>2</sub>CH<sub>2</sub>-;
- (d) R<sup>4</sup> and R<sup>5</sup> are each independently selected from a C<sub>1-3</sub>  
aliphatic group or R<sup>4</sup> and R<sup>5</sup> taken together with their  
intervening nitrogen form a piperidinyl, pyrrolidinyl,  
piperazinyl or morpholinyl ring;
- 20 (e) Ring A is an optionally substituted phenyl or thienyl;  
and
- (f) Ring B is a substituted phenyl or naphthyl.

12. The compound of claim 1 wherein G is G3.

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13. The compound of claim 12 having one or more features  
selected from the group consisting of:

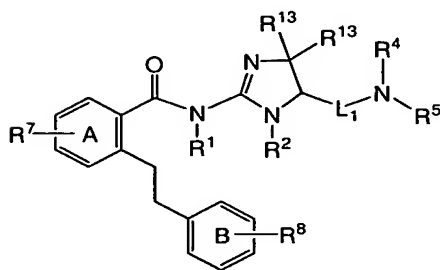
- (a) X is oxygen;
- (b) L<sub>3</sub> is selected from a direct link, -CH<sub>2</sub>-, -CH(R<sup>6</sup>)-,  
30 -CH<sub>2</sub>CH<sub>2</sub>-, -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>-, -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>-;
- (c) Q is -CH<sub>2</sub>CH<sub>2</sub>-;



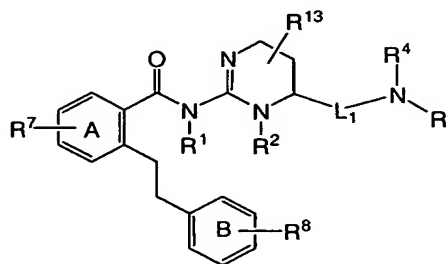
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- (d)  $R^6$  is  $C_{1-3}$  alkyl,  $CO_2H$ ,  $CO_2(C_{1-6}$  alkyl),  $CH_2CO_2H$ , or  $CH_2CO_2(C_{1-6}$  alkyl);
- (e)  $R^{14}$  is selected from a  $C_{1-6}$  aliphatic group or a 5-6 membered heterocyclic ring;
- 5 (f) Ring A is an optionally substituted phenyl or thienyl; and
- (g) Ring B is a substituted phenyl or naphthyl.
14. The compound of claim 12 having one or more features selected from the group consisting of:
- (a) X is oxygen;
- (b)  $L_3$  is  $-CH_2-$  or  $-CH(R^6)-$ ;
- (c)  $R^6$  is  $C_{1-3}$  alkyl,  $CO_2H$ ,  $CO_2(C_{1-6}$  alkyl),  $CH_2CO_2H$ , or  $CH_2CO_2(C_{1-6}$  alkyl);
- 15 (d)  $R^{14}$  is a 5-6 membered heterocyclic ring having a ring nitrogen and 0-1 additional ring heteroatoms selected from N, O or S;
- (e) Q is  $-CH_2CH_2-$ ;
- (f) Ring A is an optionally substituted phenyl or thienyl;
- 20 and
- (g) Ring B is a substituted phenyl or naphthyl.

15. The compound of claim 1 represented by formulae II-A, II-B, II-C or II-D:

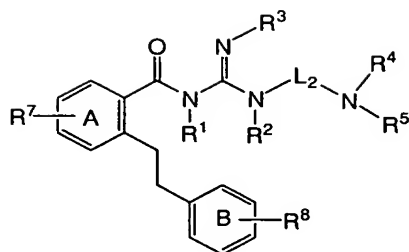


II-A

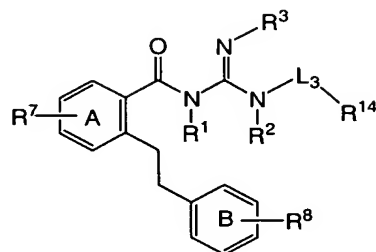


II-B

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II-C



or

II-D

5 wherein:

$R^1$  and  $R^2$  are each hydrogen;

$R^3$  is hydrogen;

$L_1$  is  $-\text{CH}_2\text{CH}_2-$  or  $-\text{CH}_2\text{CH}_2\text{CH}_2-$ ;

$L_2$  is  $-\text{CH}_2\text{CH}_2\text{CH}_2-$ ,  $-\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2-$ ,  $-\text{CH}(\text{CH}_3)\text{CH}_2\text{CH}_2-$ , or

10  $-\text{CH}(\text{CH}_3)\text{CH}_2\text{CH}_2\text{CH}_2-$ ;

$L_3$  is a direct link,  $-\text{CH}_2-$ ,  $-\text{CH}(\text{R}^6)-$ ,  $-\text{CH}_2\text{CH}_2-$ ,  $-\text{CH}_2\text{CH}_2\text{CH}_2-$ , or  $-\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2-$ ;

$\text{R}^6$  is  $\text{C}_{1-3}$  alkyl,  $\text{CO}_2\text{H}$ ,  $\text{CO}_2(\text{C}_{1-6}$  alkyl),  $\text{CH}_2\text{CO}_2\text{H}$ , or  $\text{CH}_2\text{CO}_2(\text{C}_{1-6}$  alkyl);

15  $\text{R}^7$  is absent or is  $-\text{halo}$ ,  $-\text{NO}_2$ ,  $-\text{CN}$ ,  $-\text{R}^{12}$ ,  $-\text{OR}^1$ ,  $-\text{SR}^{12}$ ,  $-\text{C}_{6-10}$  aryl,  $-\text{heterocyclyl}$ ,  $-\text{heteroaryl}$ ,  $-(\text{C}_{6-10}$  aryl)alkyl,

$-(\text{heterocyclyl})\text{alkyl}$ ,  $-(\text{heteroaryl})\text{alkyl}$ ,  $-\text{N}(\text{R}^{10})_2$ ,  $-\text{NR}^{10}\text{C}(\text{O})\text{R}^1$ ,  $-\text{NR}^{10}\text{C}(\text{O})\text{N}(\text{R}^{10})_2$ ,  $-\text{NR}^{10}\text{CO}_2\text{R}^{12}$ ,  $-\text{CO}_2\text{R}^1$ ,  $-\text{C}(\text{O})\text{R}^1$ ,  $-\text{C}(\text{O})\text{N}(\text{R}^{10})_2$ ,  $-\text{OC}(\text{O})\text{N}(\text{R}^{10})_2$ ,  $-\text{S}(\text{O})_2\text{R}^{12}$ ,  $-\text{SO}_2\text{N}(\text{R}^{10})_2$ ,  $-\text{S}(\text{O})\text{R}^{12}$ ,

20  $-\text{NR}^{10}\text{SO}_2\text{N}(\text{R}^{10})_2$ ,  $-\text{NR}^{10}\text{SO}_2\text{R}^{12}$ , or  $-\text{C}(=\text{NH})-\text{N}(\text{R}^{10})_2$ , or two adjacent  $\text{R}^7$  taken together with their intervening atoms form a 5-6 membered unsaturated or partially unsaturated ring having 0-2 heteroatoms selected from nitrogen, oxygen or sulfur;

25  $\text{R}^8$  is  $-\text{halo}$ ,  $-\text{NO}_2$ ,  $-\text{CN}$ , or a substituted or unsubstituted group selected from  $-\text{R}^{12}$ ,  $-\text{OR}^1$ ,  $-\text{SR}^{12}$ ,  $-\text{C}_{6-10}$  aryl,  $-\text{heterocyclyl}$ ,  $-\text{heteroaryl}$ ,  $-(\text{C}_{6-10}$  aryl)alkyl,  $-(\text{heterocyclyl})\text{alkyl}$ ,  $-(\text{heteroaryl})\text{alkyl}$ ,  $-\text{N}(\text{R}^{10})_2$ ,

$-\text{NR}^{10}\text{C}(\text{O})\text{R}^1$ ,  $-\text{NR}^{10}\text{C}(\text{O})\text{N}(\text{R}^{10})_2$ ,  $-\text{NR}^{10}\text{CO}_2\text{R}^{12}$ ,  $-\text{CO}_2\text{R}^1$ ,  $-\text{C}(\text{O})\text{R}^1$ ,  
 $-\text{C}(\text{O})\text{N}(\text{R}^{10})_2$ ,  $-\text{OC}(\text{O})\text{N}(\text{R}^{10})_2$ ,  $-\text{S}(\text{O})_2\text{R}^{12}$ ,  $-\text{SO}_2\text{N}(\text{R}^{10})_2$ ,  $-\text{S}(\text{O})\text{R}^{12}$ ,  
 $-\text{NR}^{10}\text{SO}_2\text{N}(\text{R}^{10})_2$ ,  $-\text{NR}^{10}\text{SO}_2\text{R}^{12}$ , or  $-\text{C}(=\text{NH})-\text{N}(\text{R}^{10})_2$ , or two  
adjacent  $\text{R}^8$  taken together with their intervening atoms  
5 form a 5-6 membered unsaturated or partially unsaturated  
ring having 0-2 heteroatoms selected from nitrogen, oxygen  
or sulfur;

$\text{R}^4$  and  $\text{R}^5$  (i) are each independently selected from a  $\text{C}_{1-4}$   
aliphatic group, or (ii)  $\text{R}^4$  and  $\text{R}^5$  taken together with  
10 their intervening nitrogen form a 5-6 membered ring, or  
(iii)  $\text{R}^4$  is a  $\text{C}_{1-4}$  aliphatic group and  $\text{R}^5$  is aryl, aralkyl,  
heteroaryl, or heteroaralkyl;

$\text{R}^{14}$  is a  $\text{C}_{1-6}$  aliphatic or 5-6 membered heterocyclic ring or  $\text{R}^3$   
and  $\text{R}^{14}$  taken together with their intervening nitrogens  
15 form a 4-6 membered ring;

each  $\text{R}^{13}$  is independently selected from hydrogen,  $\text{C}_{1-6}$   
aliphatic, or a substituent selected from the group  
consisting of  $\text{COR}^1$ ,  $\text{CO}_2\text{R}^1$ ,  $\text{CN}$ ,  $-\text{N}(\text{R}_{10})_2$ ,  $\text{CON}(\text{R}^{10})_2$ ,  $-\text{OR}^1$ , or  
two  $\text{R}^{13}$  on the same carbon taken together form  $=\text{O}$ , or two  
20  $\text{R}^{13}$  taken together with their intervening atoms form a 3-7  
membered ring having 0-2 ring heteroatoms;

each  $\text{R}^{10}$  is independently selected from hydrogen, a  
substituted or unsubstituted  $\text{C}_{1-8}$  aliphatic group,  $\text{C}(=\text{O})\text{R}^1$ ,  
 $\text{CO}_2\text{R}^1$ ,  $\text{SO}_2\text{R}^1$ , or two  $\text{R}^{10}$  on the same nitrogen taken together  
25 with the nitrogen form a 5-8 membered aromatic or non-  
aromatic ring having, in addition to the nitrogen, 0-2  
ring heteroatoms selected from N, O, or S;

each  $\text{R}^{11}$  is independently selected from hydrogen or an  
optionally substituted  $\text{C}_{1-8}$  aliphatic group; and

30 each  $\text{R}^{12}$  is independently selected from a substituted or  
unsubstituted  $\text{C}_{1-8}$  aliphatic group.

16. The compound of claim 15 wherein:

R<sup>1</sup> and R<sup>2</sup> are each hydrogen;

R<sup>3</sup> is hydrogen;

L<sub>1</sub> is -CH<sub>2</sub>CH<sub>2</sub>- or -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>-;

5 L<sub>2</sub> is -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>-, -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>-, -CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>2</sub>-, or  
-CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>-;

L<sub>3</sub> is a direct link, -CH<sub>2</sub>-, -CH(R<sup>6</sup>)-, -CH<sub>2</sub>CH<sub>2</sub>-, -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>-, or  
-CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>-;

R<sup>6</sup> is CO<sub>2</sub>H, CO<sub>2</sub>(C<sub>1-6</sub> alkyl), CH<sub>2</sub>CO<sub>2</sub>H, or CH<sub>2</sub>CO<sub>2</sub>(C<sub>1-6</sub> alkyl);

10 R<sup>7</sup> is absent or is -halo, -CN, -R<sup>12</sup>, -OR<sup>1</sup>, -SR<sup>12</sup>, -N(R<sup>10</sup>)<sub>2</sub>,  
-NR<sup>10</sup>C(O)R<sup>1</sup>, -NR<sup>10</sup>C(O)N(R<sup>10</sup>)<sub>2</sub>, -NR<sup>10</sup>CO<sub>2</sub>R<sup>12</sup>, -CO<sub>2</sub>R<sup>1</sup>, -C(O)R<sup>1</sup>,  
-C(O)N(R<sup>10</sup>)<sub>2</sub>, -OC(O)N(R<sup>10</sup>)<sub>2</sub>, -S(O)<sub>2</sub>R<sup>12</sup>, -SO<sub>2</sub>N(R<sup>10</sup>)<sub>2</sub>, -S(O)R<sup>12</sup>,  
-NR<sup>10</sup>SO<sub>2</sub>N(R<sup>10</sup>)<sub>2</sub>, or -NR<sup>10</sup>SO<sub>2</sub>R<sup>12</sup>;

R<sup>8</sup> is -halo, -CN, or a substituted or unsubstituted group  
15 selected from -R<sup>12</sup>, -OR<sup>1</sup>, -SR<sup>12</sup>, -N(R<sup>10</sup>)<sub>2</sub>, -NR<sup>10</sup>C(O)R<sup>1</sup>,  
-NR<sup>10</sup>CO<sub>2</sub>R<sup>12</sup>, -CO<sub>2</sub>R<sup>1</sup>, -C(O)R<sup>1</sup>, -C(O)N(R<sup>10</sup>)<sub>2</sub>, -OC(O)N(R<sup>10</sup>)<sub>2</sub>,  
-S(O)<sub>2</sub>R<sup>12</sup>, -SO<sub>2</sub>N(R<sup>10</sup>)<sub>2</sub>, -S(O)R<sup>12</sup>, -NR<sup>10</sup>SO<sub>2</sub>N(R<sup>10</sup>)<sub>2</sub>, or  
-NR<sup>10</sup>SO<sub>2</sub>R<sup>12</sup>, or two adjacent R<sup>8</sup> taken together with their  
intervening atoms form a 5-6 membered unsaturated or  
20 partially unsaturated ring having 0-2 heteroatoms selected  
from nitrogen, oxygen or sulfur;

R<sup>4</sup> and R<sup>5</sup> are each independently selected from C<sub>1-3</sub> alkyl or R<sup>4</sup>  
and R<sup>5</sup> taken together with their intervening nitrogen form  
a 5-6 membered ring;

25 R<sup>14</sup> is a C<sub>1-6</sub> aliphatic or a 5-6 membered heterocyclic ring  
having a ring nitrogen and 0-1 additional ring heteroatoms  
selected from N, O or S;

each R<sup>13</sup> is hydrogen;

each R<sup>10</sup> is hydrogen;

30 each R<sup>11</sup> is independently selected from hydrogen or an  
optionally substituted C<sub>1-5</sub> aliphatic group; and

each  $R^{12}$  is independently selected from a substituted or unsubstituted  $C_{1-5}$  aliphatic group.

17. The compound of claim 16 wherein:

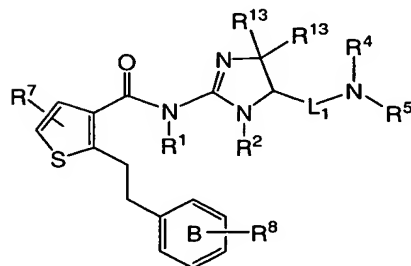
5  $R^7$  is absent or is halo;

Ring B is a phenyl ring having two  $R^8$  substituents that are para to one another or Ring B is a naphthyl ring; and

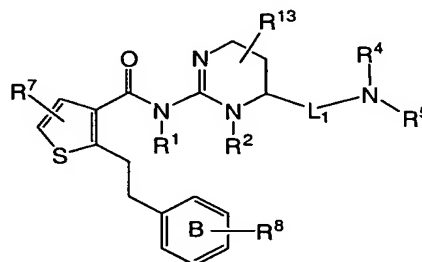
each  $R^8$  is independently selected from halo,  $C_{1-4}$  alkyl,  $C_{1-3}$  alkoxy,  $CO(C_{1-3}$  alkyl),  $CONH(C_{1-3}$  alkyl),  $SO_2(C_{1-3}$  alkyl), or

10  $SO_2NH(C_{1-3}$  alkyl).

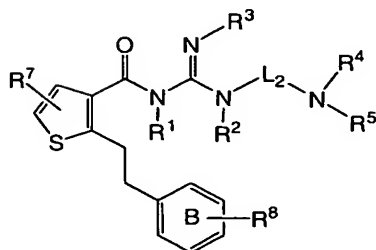
18. The compound of claim 1 represented by formulae III-A, III-B, III-C or III-D:



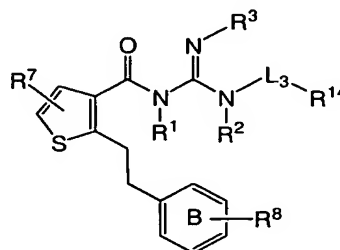
III-A



III-B



III-C



III-D

or

;

wherein:

$R^1$ , and  $R^2$  are each hydrogen;

$R^3$  is hydrogen;

$L_1$  is  $-\text{CH}_2\text{CH}_2-$  or  $-\text{CH}_2\text{CH}_2\text{CH}_2-$ ;

$L_2$  is  $-\text{CH}_2\text{CH}_2\text{CH}_2-$ ,  $-\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2-$ ,  $-\text{CH}(\text{CH}_3)\text{CH}_2\text{CH}_2-$ , or  
 $-\text{CH}(\text{CH}_3)\text{CH}_2\text{CH}_2\text{CH}_2-$ ;

$L_3$  is a direct link,  $-\text{CH}_2-$ , or  $-\text{CH}_2\text{CH}_2-$ ;

5  $R^7$  is absent or is -halo,  $-\text{CO}_2\text{R}^1$ ,  $-\text{C}(\text{O})\text{R}^1$ ,  $-\text{C}(\text{O})\text{N}(\text{R}^{10})_2$ , or two adjacent  $R^7$  taken together with their intervening atoms form a 5-6 membered unsaturated or partially unsaturated ring having 0-2 heteroatoms selected from nitrogen, oxygen or sulfur;

10  $R^8$  is -halo,  $-\text{NO}_2$ ,  $-\text{CN}$ , or a substituted or unsubstituted group selected from  $-\text{R}^{12}$ ,  $-\text{OR}^1$ ,  $-\text{SR}^{12}$ ,  $-\text{C}_{6-10}$  aryl, -heterocyclyl, -heteroaryl,  $-(\text{C}_{6-10} \text{ aryl})\text{alkyl}$ ,  $-(\text{heterocyclyl})\text{alkyl}$ ,  $-(\text{heteroaryl})\text{alkyl}$ ,  $-\text{N}(\text{R}^{10})_2$ ,  $-\text{NR}^{10}\text{C}(\text{O})\text{R}^1$ ,  $-\text{NR}^{10}\text{C}(\text{O})\text{N}(\text{R}^{10})_2$ ,  $-\text{NR}^{10}\text{CO}_2\text{R}^{12}$ ,  $-\text{CO}_2\text{R}^1$ ,  $-\text{C}(\text{O})\text{R}^1$ ,  
15  $-\text{C}(\text{O})\text{N}(\text{R}^{10})_2$ ,  $-\text{OC}(\text{O})\text{N}(\text{R}^{10})_2$ ,  $-\text{S}(\text{O})_2\text{R}^{12}$ ,  $-\text{SO}_2\text{N}(\text{R}^{10})_2$ ,  $-\text{S}(\text{O})\text{R}^{12}$ ,  $-\text{NR}^{10}\text{SO}_2\text{N}(\text{R}^{10})_2$ ,  $-\text{NR}^{10}\text{SO}_2\text{R}^{12}$ , or  $-\text{C}(=\text{NH})-\text{N}(\text{R}^{10})_2$ , or two adjacent  $R^8$  taken together with their intervening atoms form a 5-6 membered unsaturated or partially unsaturated ring having 0-2 heteroatoms selected from nitrogen, oxygen  
20 or sulfur;

$R^4$  and  $R^5$  are each independently selected from  $\text{C}_{1-3}$  alkyl or  $R^4$  and  $R^5$  taken together with their intervening nitrogen form a 5-6 membered ring;

$R^{14}$  is a  $\text{C}_{1-6}$  aliphatic or a 5-6 membered heterocyclic ring  
25 having a ring nitrogen and 0-1 additional ring heteroatoms selected from N, O or S;

each  $R^{13}$  is independently selected from hydrogen,  $\text{C}_{1-6}$  aliphatic, or a substituent selected from the group consisting of  $\text{COR}^1$ ,  $\text{CO}_2\text{R}^1$ ,  $\text{CN}$ ,  $-\text{N}(\text{R}^{10})_2$ ,  $\text{CON}(\text{R}^{10})_2$ ,  $-\text{OR}^1$ , or  
30 two  $R^{13}$  on the same carbon taken together form  $=\text{O}$ , or two  $R^{13}$  taken together with their intervening atoms form a 3-7 membered ring having 0-2 ring heteroatoms;

each R<sup>10</sup> is independently selected from hydrogen, a substituted or unsubstituted C<sub>1-8</sub> aliphatic group, C(=O)R<sup>1</sup>, CO<sub>2</sub>R<sup>1</sup>, SO<sub>2</sub>R<sup>1</sup>, or two R<sup>10</sup> on the same nitrogen taken together with the nitrogen form a 5-8 membered aromatic or non-aromatic ring having, in addition to the nitrogen, 0-2 ring heteroatoms selected from N, O, or S;

5 each R<sup>11</sup> is independently selected from hydrogen or an optionally substituted C<sub>1-8</sub> aliphatic group; and

each R<sup>12</sup> is independently selected from a substituted or unsubstituted C<sub>1-8</sub> aliphatic group.

10

19. The compound of claim 18 wherein:

R<sup>1</sup>, R<sup>2</sup>, and R<sup>3</sup> are each hydrogen;

L<sub>1</sub> is -CH<sub>2</sub>CH<sub>2</sub>- or -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>-;

15 L<sub>2</sub> is -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>-, -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>-, -CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>2</sub>-, or -CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>-;

L<sub>3</sub> is a direct link, -CH<sub>2</sub>-, or -CH<sub>2</sub>CH<sub>2</sub>-;

R<sup>7</sup> is absent;

R<sup>8</sup> is -halo, -CN, or a substituted or unsubstituted group selected from -R<sup>12</sup>, -OR<sup>1</sup>, -SR<sup>12</sup>, , -N(R<sup>10</sup>)<sub>2</sub>, -NR<sup>10</sup>C(O)R<sup>1</sup>, -NR<sup>10</sup>CO<sub>2</sub>R<sup>12</sup>, -CO<sub>2</sub>R<sup>1</sup>, -C(O)R<sup>1</sup>, -C(O)N(R<sup>10</sup>)<sub>2</sub>, -OC(O)N(R<sup>10</sup>)<sub>2</sub>, -S(O)<sub>2</sub>R<sup>12</sup>, -SO<sub>2</sub>N(R<sup>10</sup>)<sub>2</sub>, -S(O)R<sup>12</sup>, -NR<sup>10</sup>SO<sub>2</sub>N(R<sup>10</sup>)<sub>2</sub>, or -NR<sup>10</sup>SO<sub>2</sub>R<sup>12</sup>, or two adjacent R<sup>8</sup> taken together with their intervening atoms form a 5-6 membered unsaturated or partially unsaturated ring having 0-2 heteroatoms selected from nitrogen, oxygen or sulfur;

20

25

R<sup>4</sup> and R<sup>5</sup> are each independently selected from C<sub>1-3</sub> alkyl or R<sup>4</sup> and R<sup>5</sup> taken together with their intervening nitrogen form a 5-6 membered ring;

30 R<sup>14</sup> is a C<sub>1-6</sub> aliphatic or a 5-6 membered heterocyclic ring having a ring nitrogen and 0-1 additional ring heteroatoms selected from N, O or S;

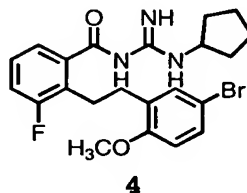
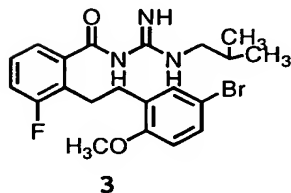
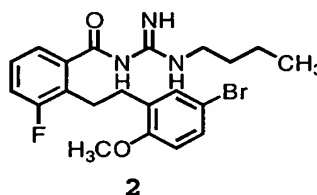
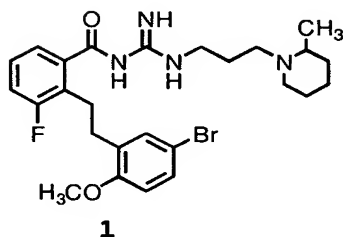
-125-

- each R<sup>13</sup> is hydrogen;  
each R<sup>10</sup> is hydrogen;  
each R<sup>11</sup> is independently selected from hydrogen or an  
optionally substituted C<sub>1-5</sub> aliphatic group; and  
5 each R<sup>12</sup> is independently selected from a substituted or  
unsubstituted C<sub>1-5</sub> aliphatic group.

20. The compound of claim 18 wherein:

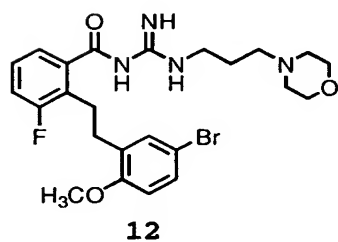
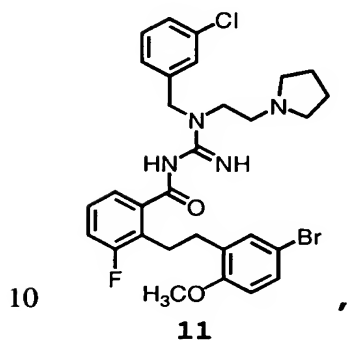
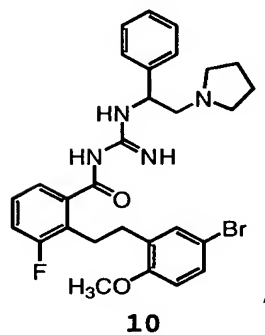
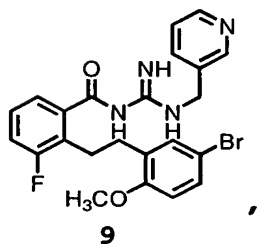
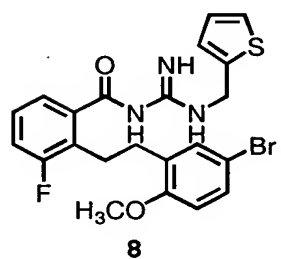
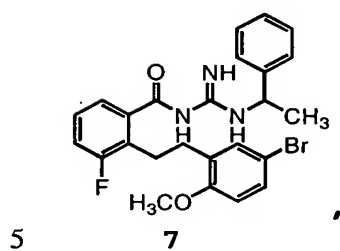
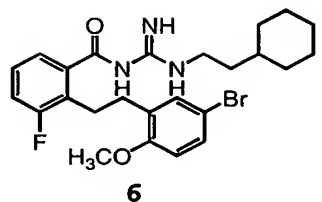
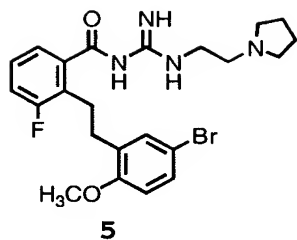
- Ring B is a phenyl ring having two R<sup>8</sup> substituents that are  
10 para to one another or Ring B is a naphthyl ring; and  
Each R<sup>8</sup> is independently selected from halo, C<sub>1-4</sub> alkyl, C<sub>1-3</sub>  
alkoxy, CO(C<sub>1-3</sub> alkyl), CONH(C<sub>1-3</sub> alkyl), SO<sub>2</sub>(C<sub>1-3</sub> alkyl), or  
SO<sub>2</sub>NH(C<sub>1-3</sub> alkyl).

- 15 21. A compound selected from the group consisting of: ✓

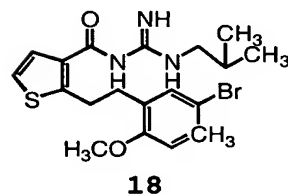
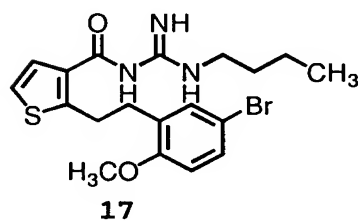
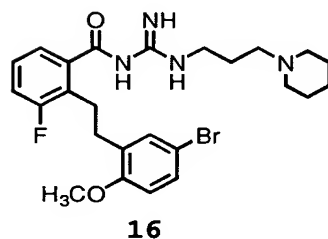
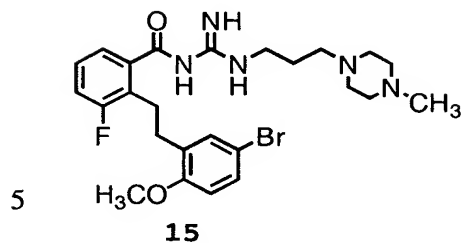
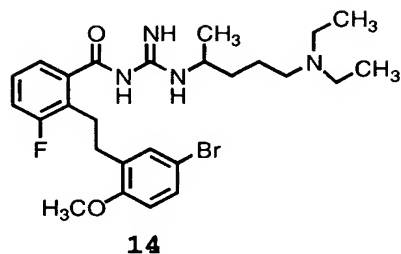
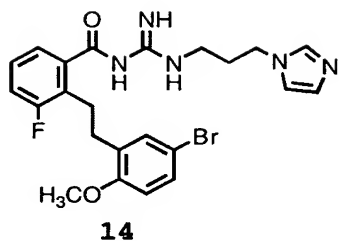


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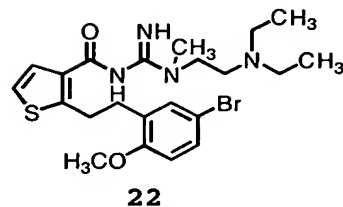
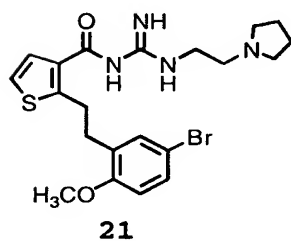
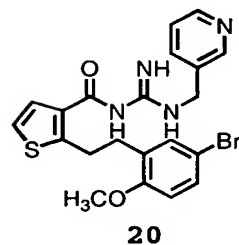
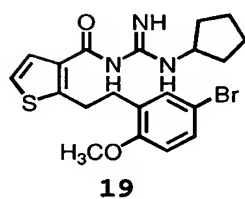


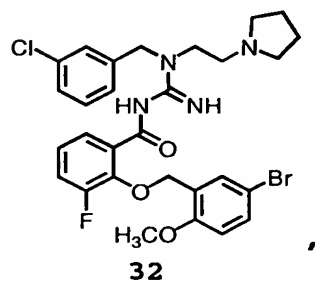
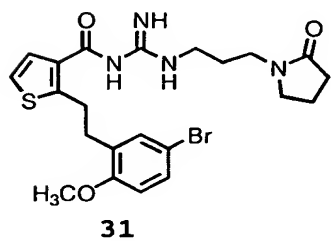
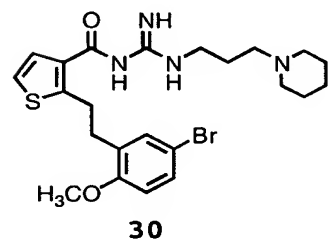
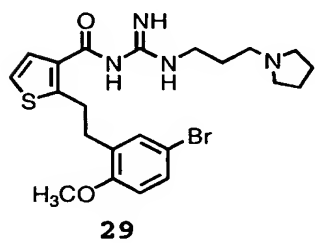
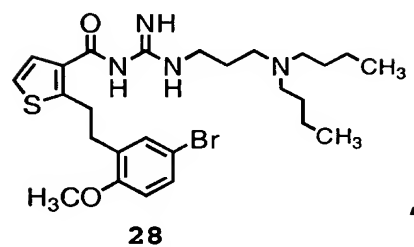
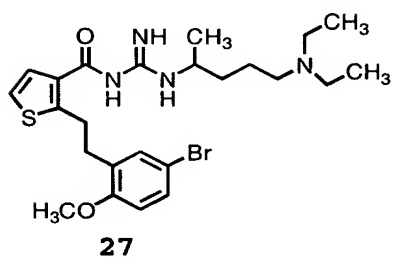
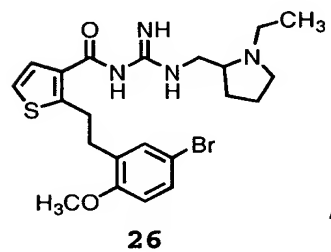
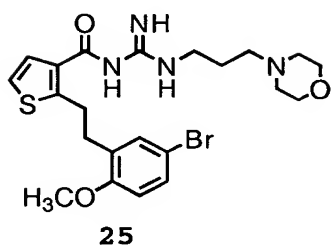
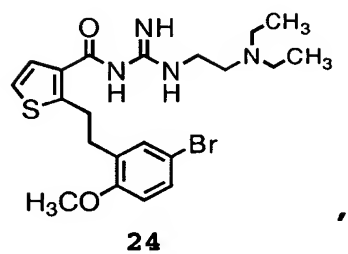
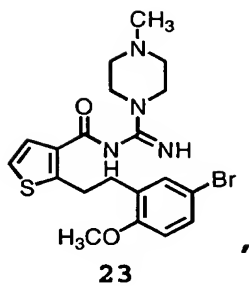


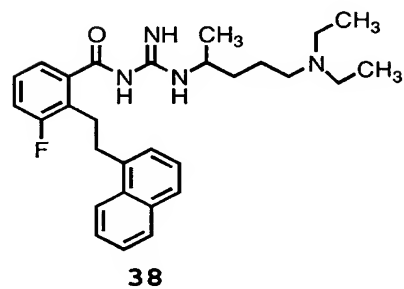
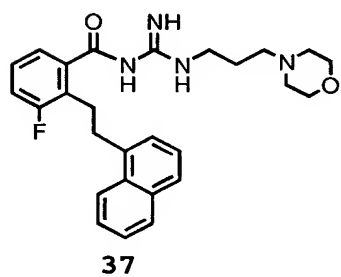
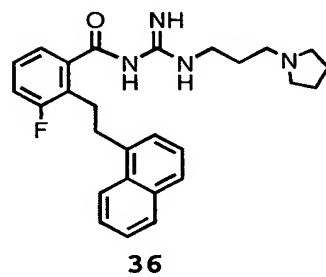
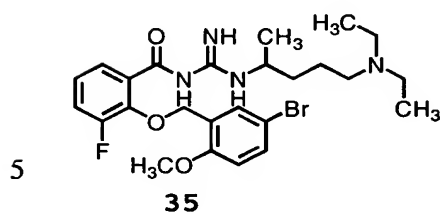
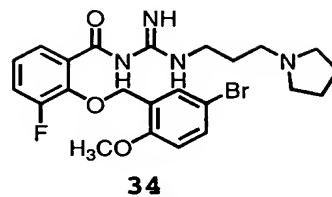
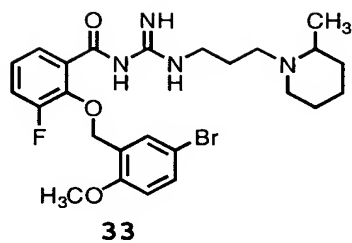
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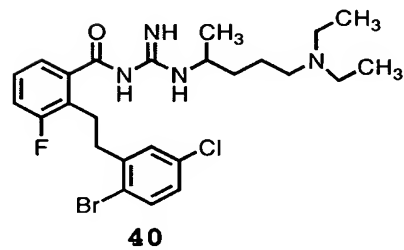
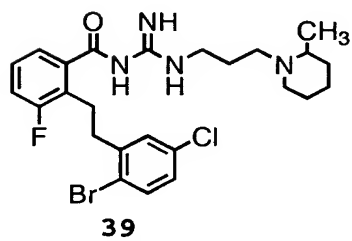
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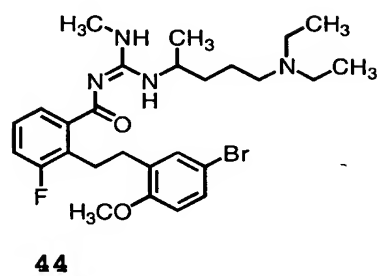
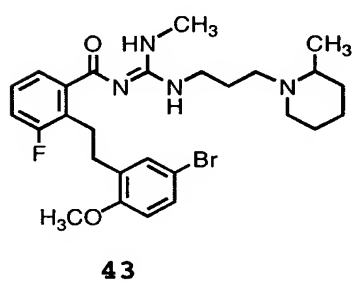
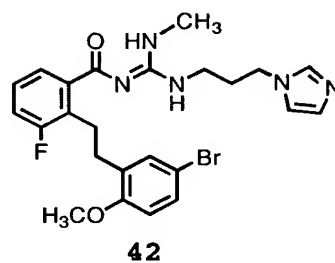
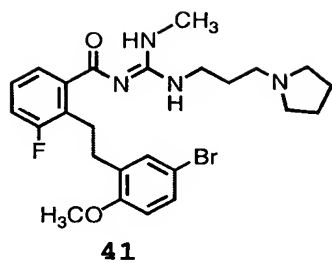




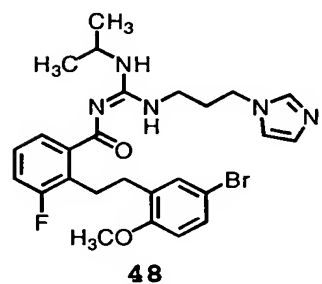
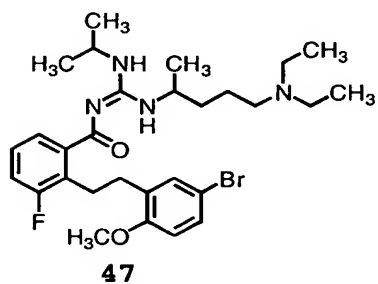
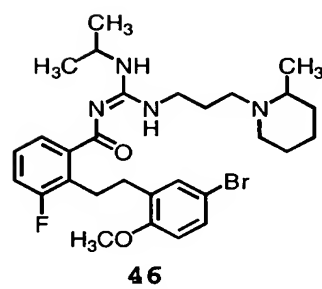
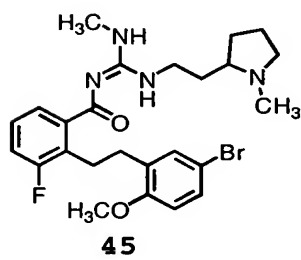
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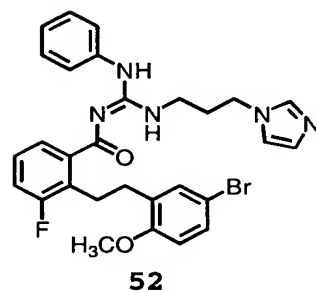
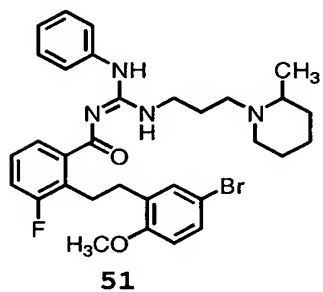
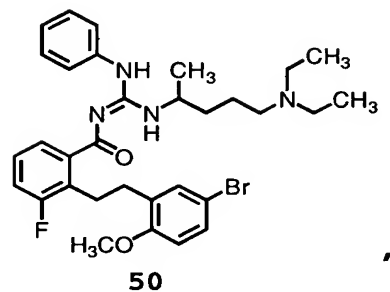
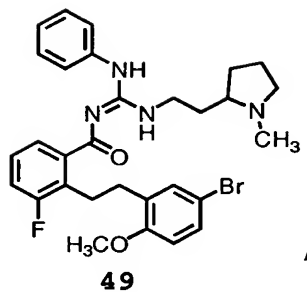


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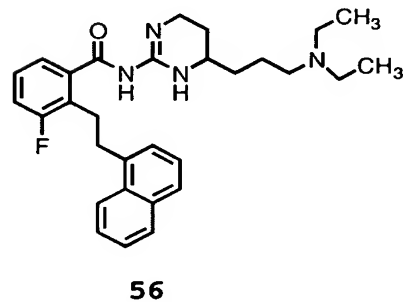
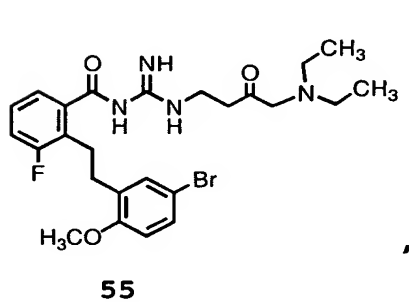
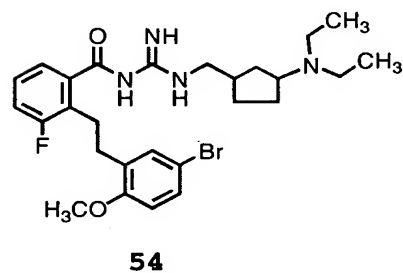
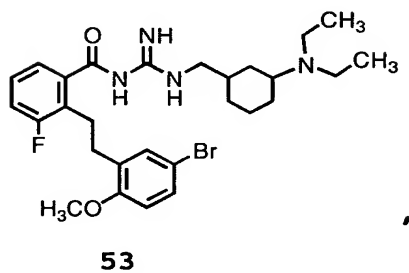


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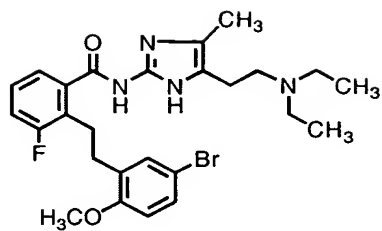
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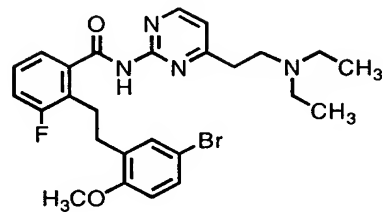
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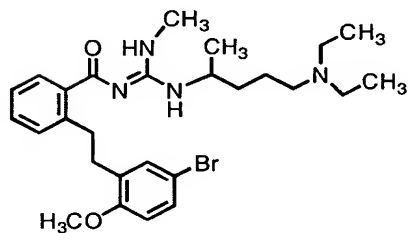
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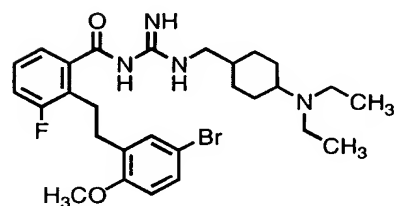
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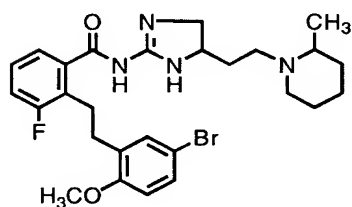
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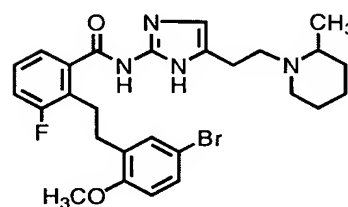
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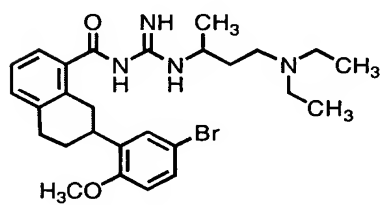
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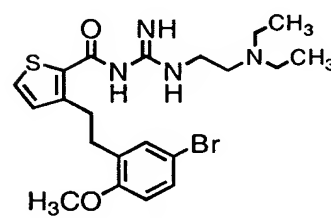
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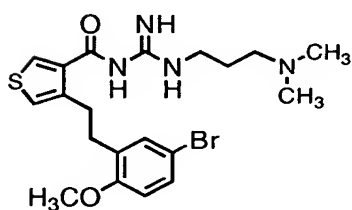
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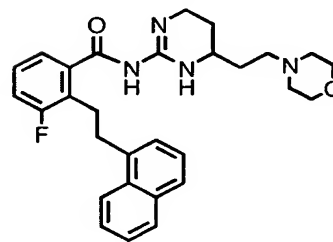
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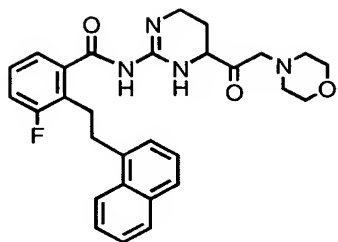
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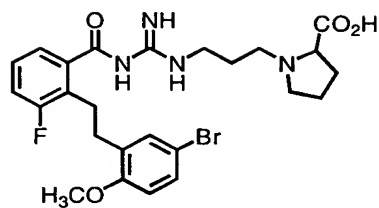
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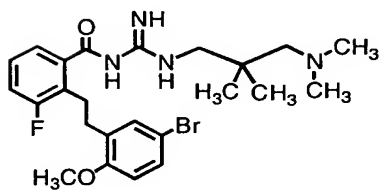
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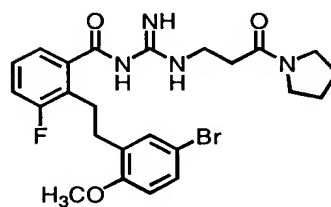
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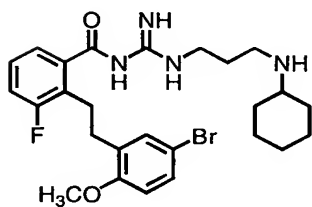
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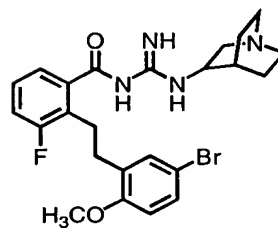
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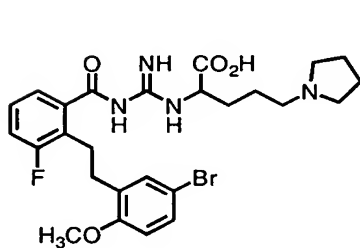
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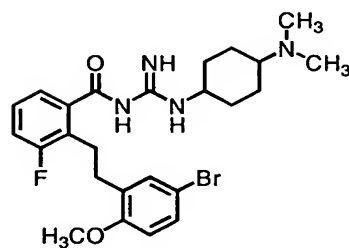
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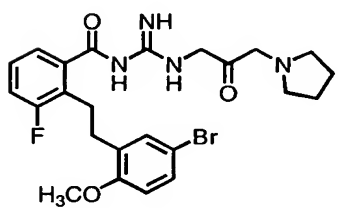
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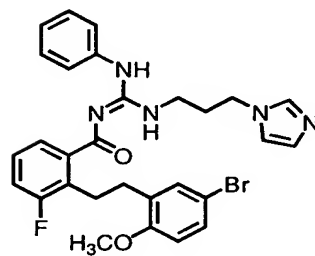
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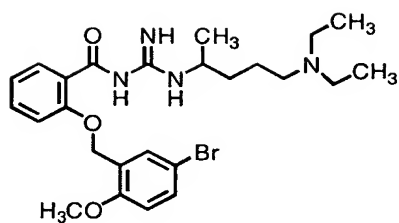


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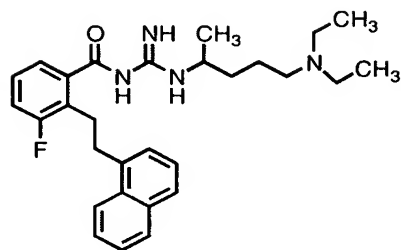


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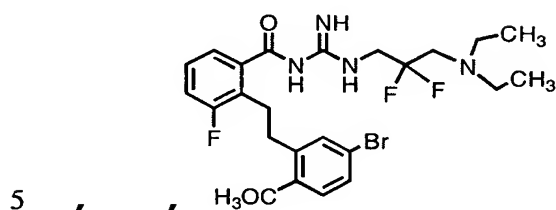




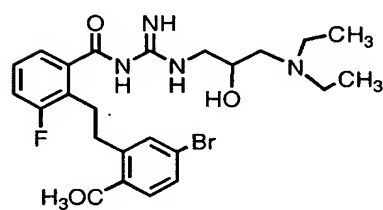
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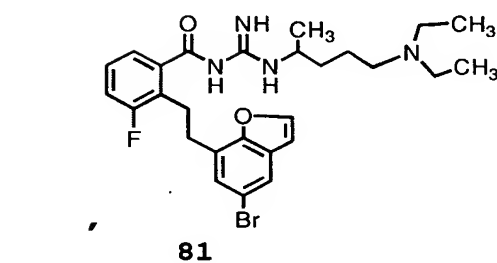
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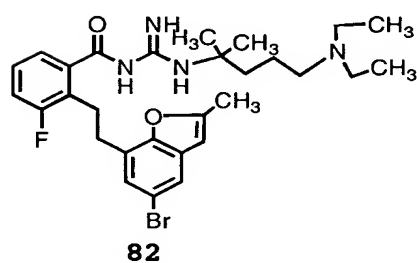
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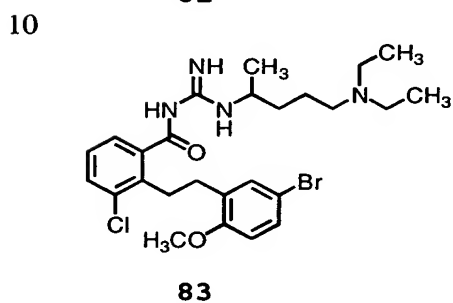
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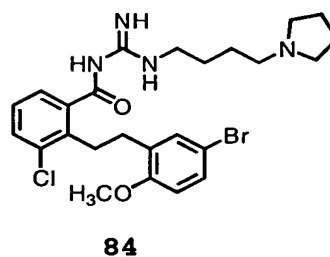
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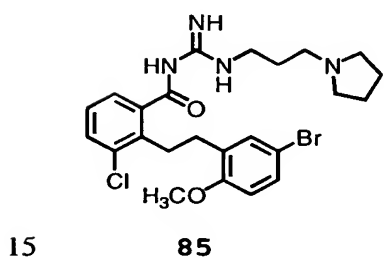
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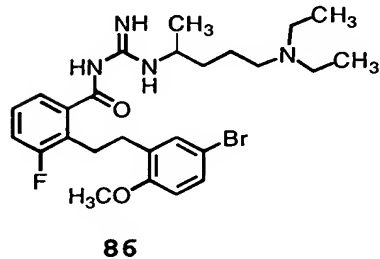
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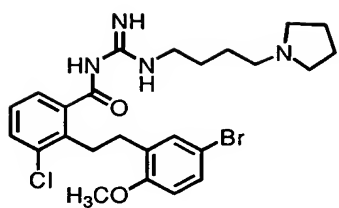
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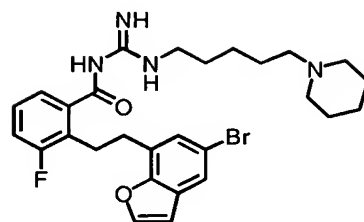
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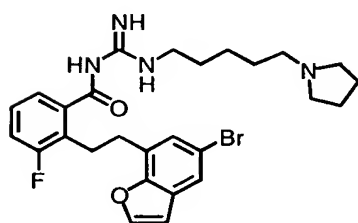
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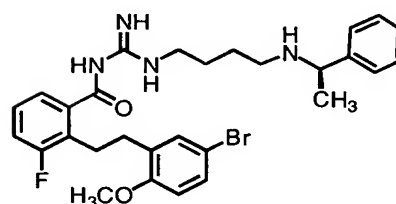
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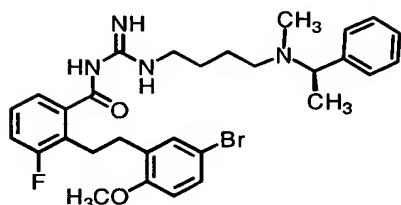
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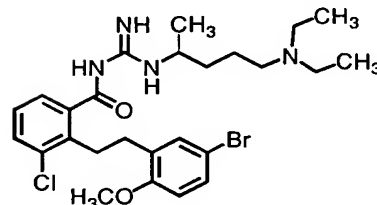
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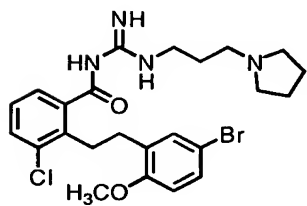
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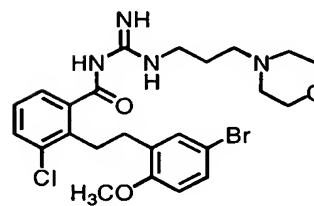
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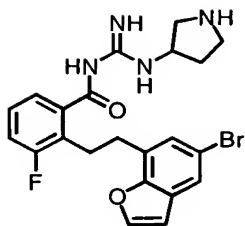
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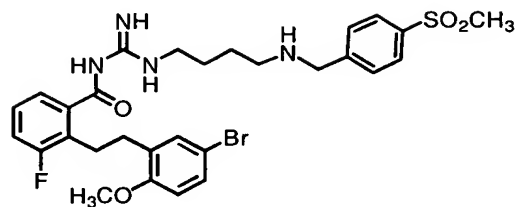
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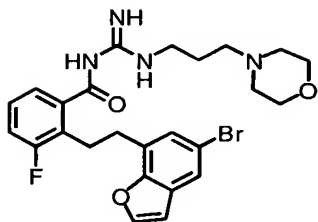
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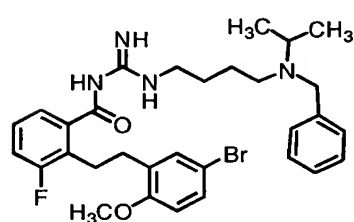
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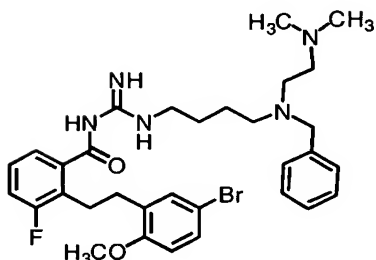
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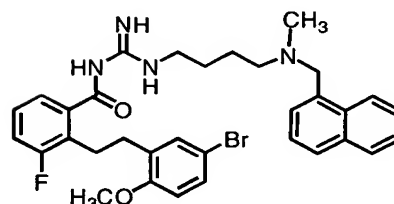
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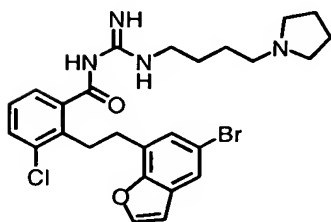
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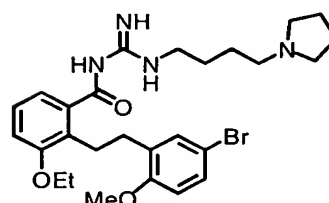
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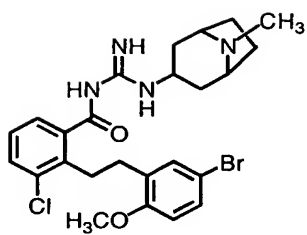
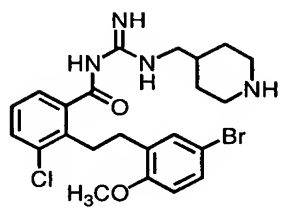
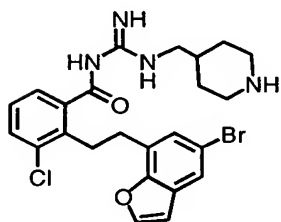
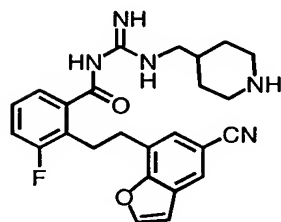
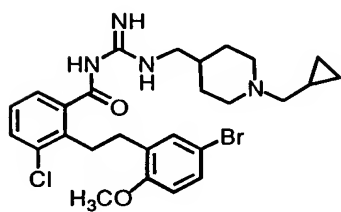
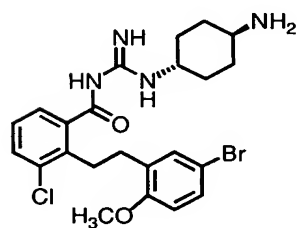
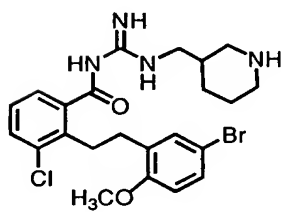
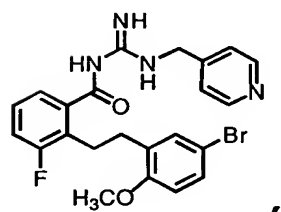


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102

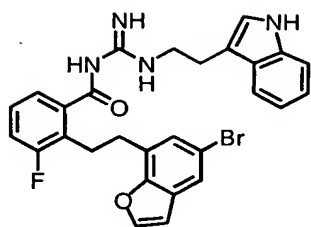
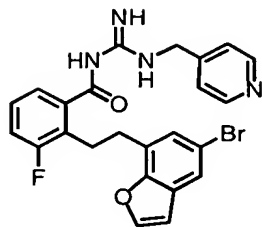
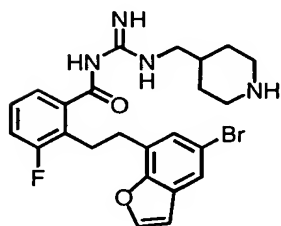
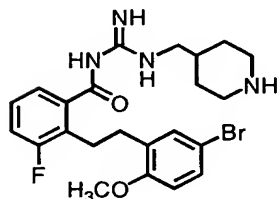
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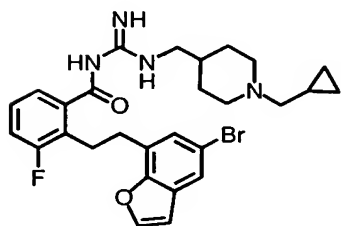
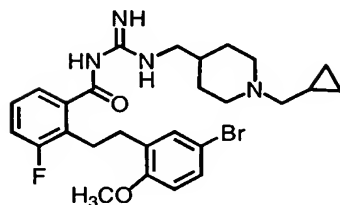
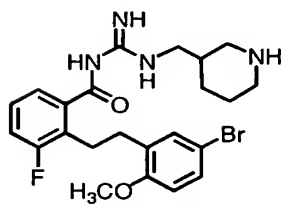
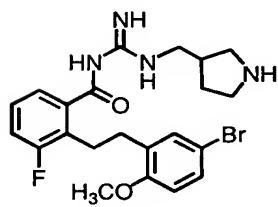
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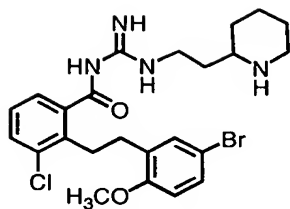
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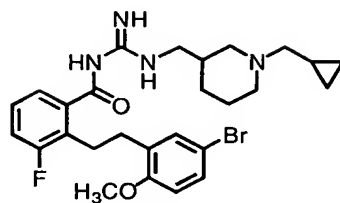
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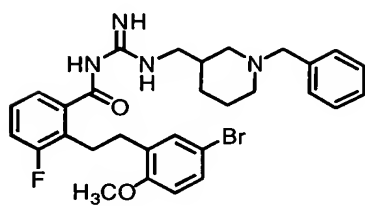
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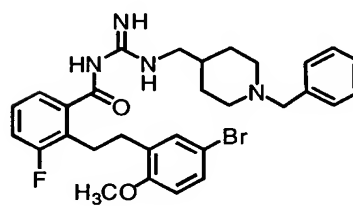
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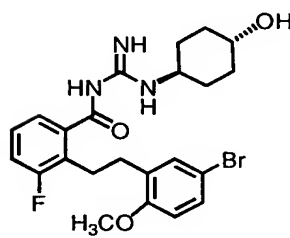
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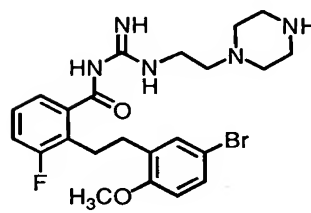
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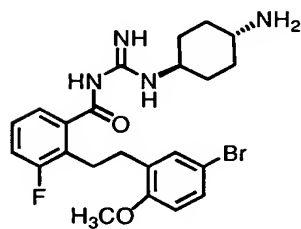
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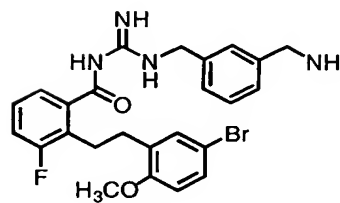
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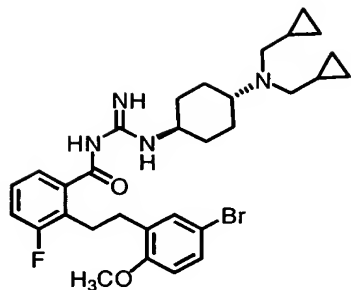


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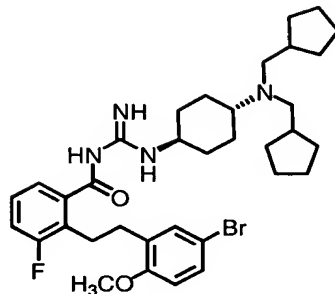


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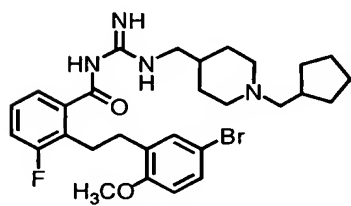
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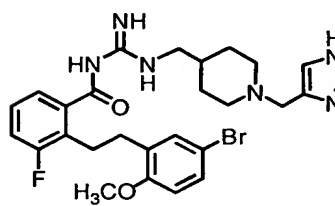
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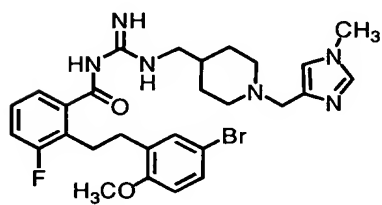
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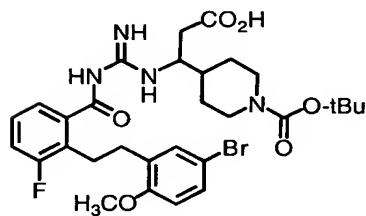
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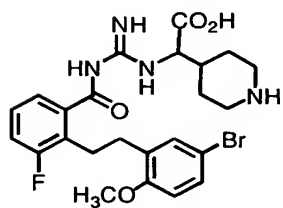
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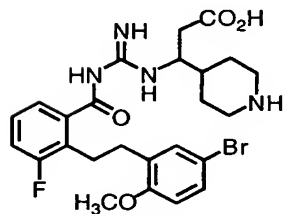
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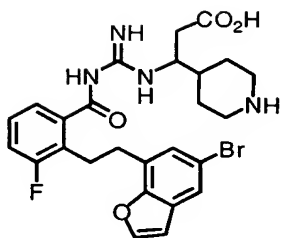
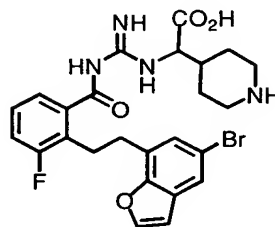
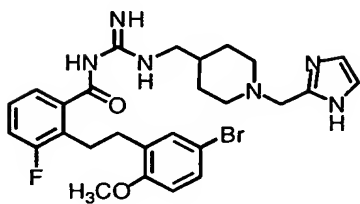
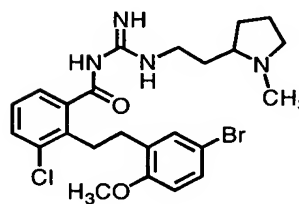
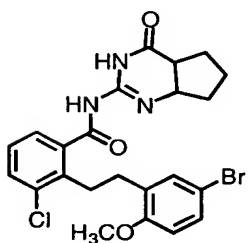
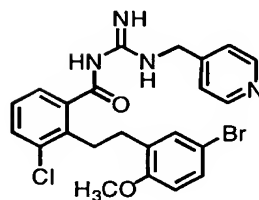
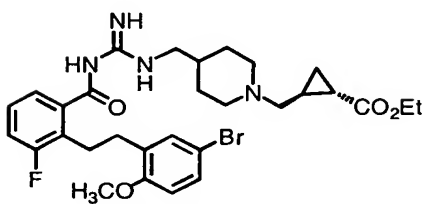
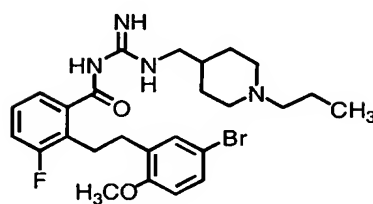


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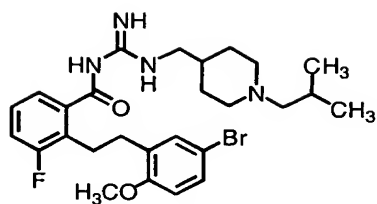
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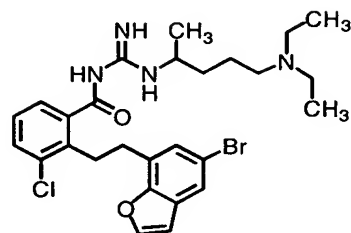
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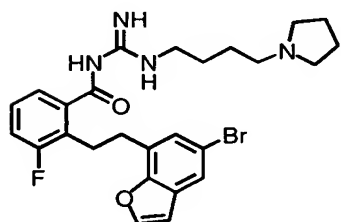
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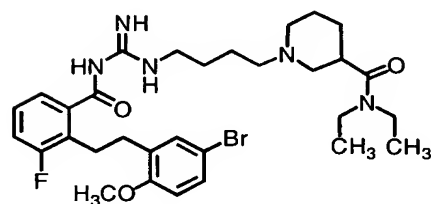
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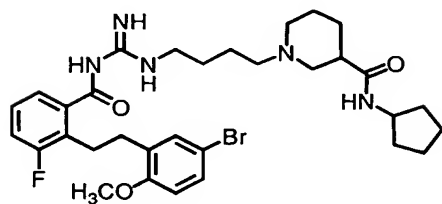
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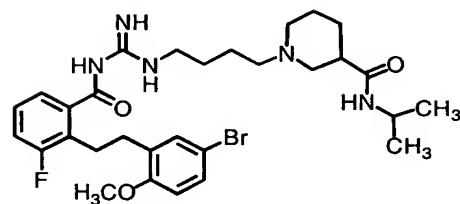
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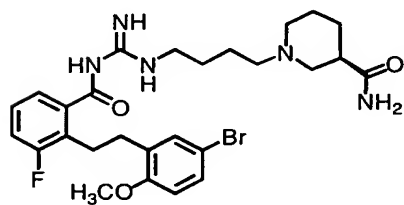
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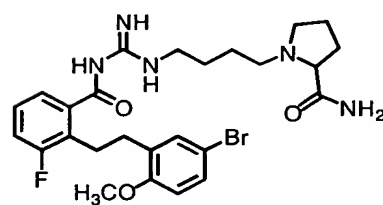
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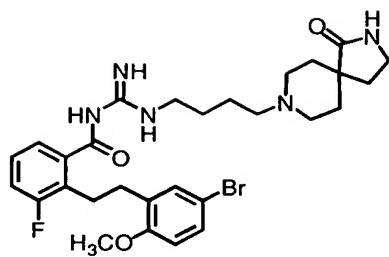
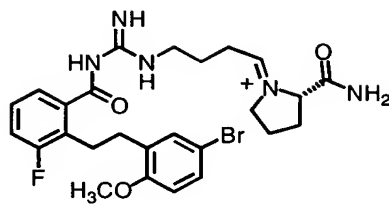
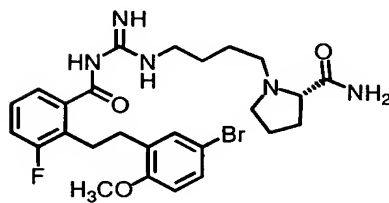
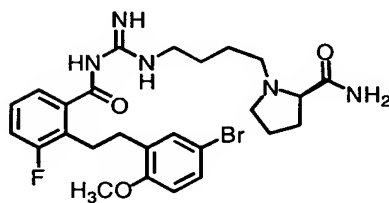
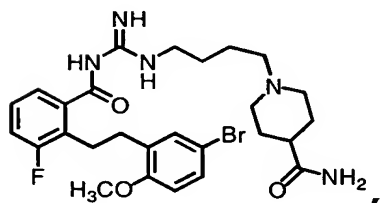
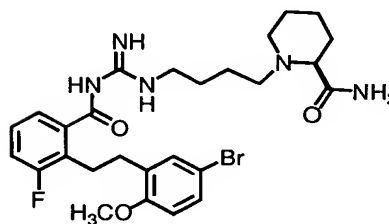
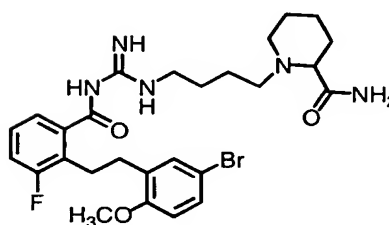
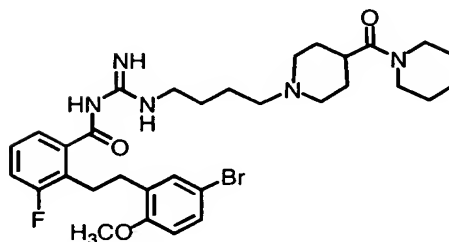


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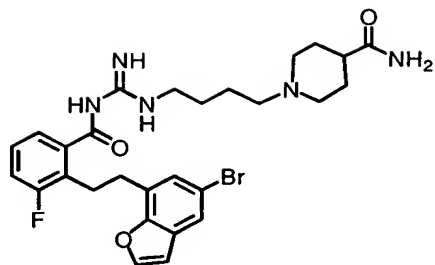


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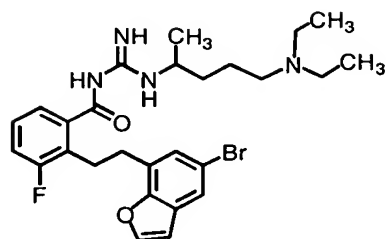
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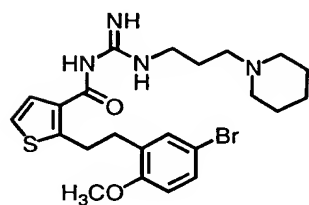
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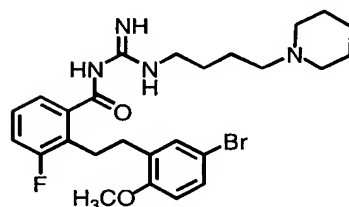


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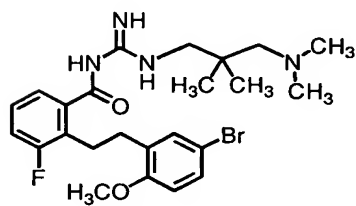


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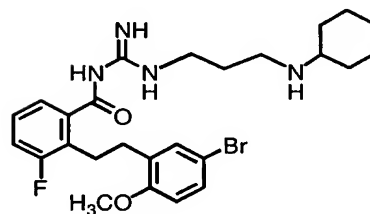
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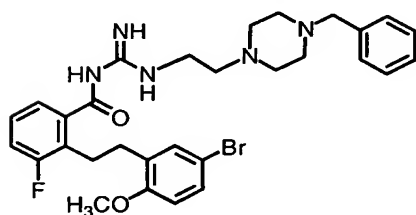
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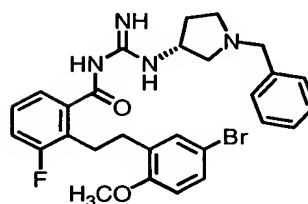


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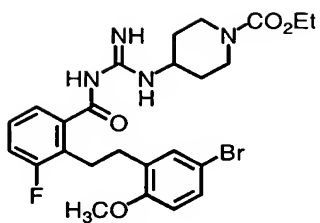
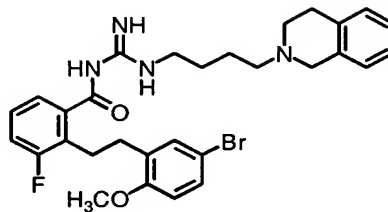
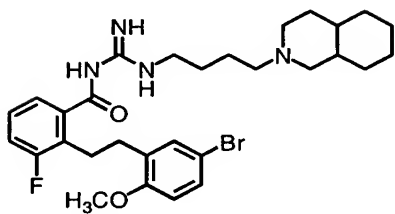
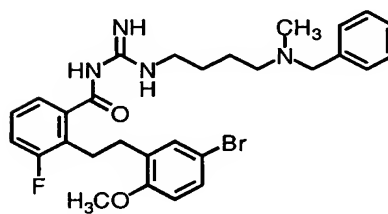
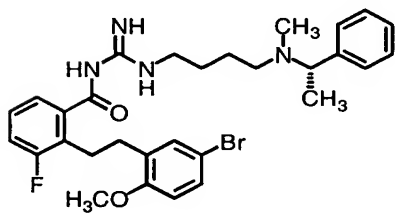
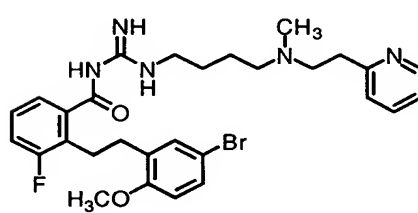
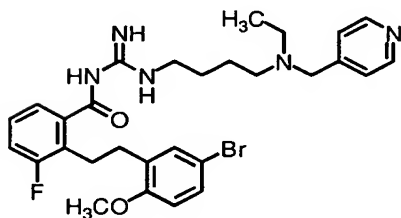
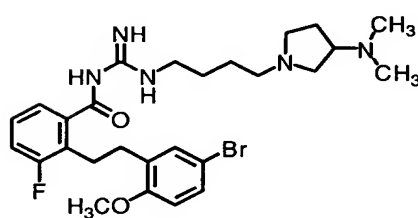
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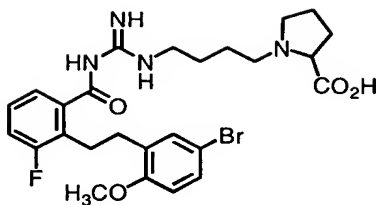


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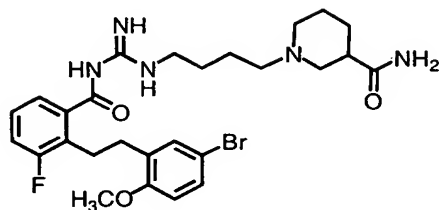
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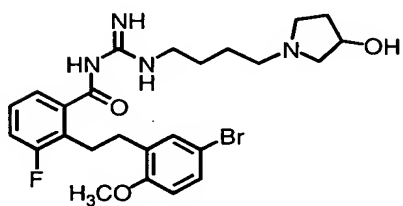
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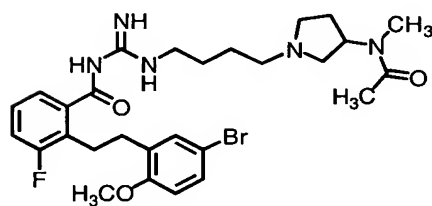
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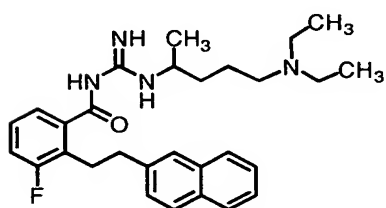
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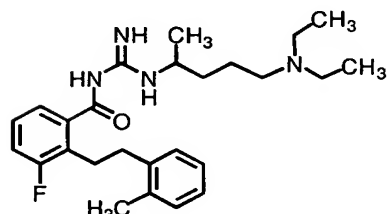
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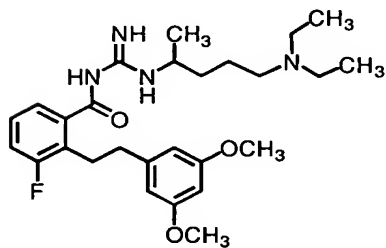
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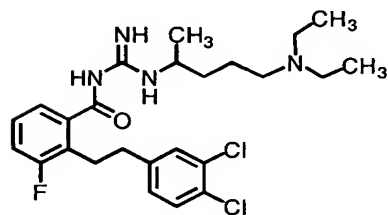
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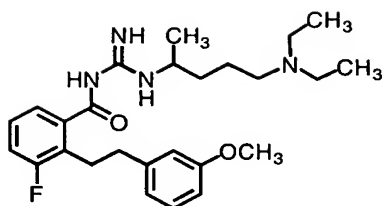
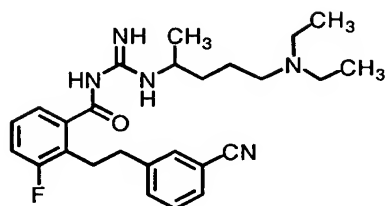
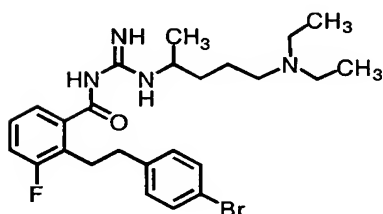
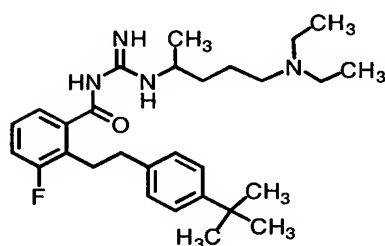
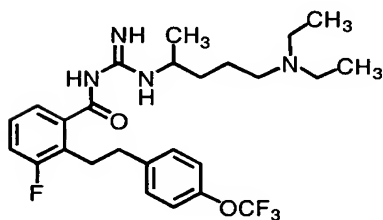


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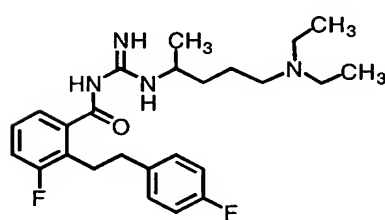
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**183****184****185****186****187**

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10

22. A pharmaceutical composition comprising a compound according to claim 1 and a pharmaceutically acceptable carrier.

15

23. A method of treating an MC4-R associated disorder in a patient in need thereof comprising administering to said patient a compound of formula (I) in claim 1.

20

24. A method of treating an MC4-R associated disorder in a patient in need thereof comprising administering to said

patient a pharmaceutical composition comprising a compound of formula (I) in claim 1.

25. A method of treating a weight loss disorder in a subject  
5 identified as in need of such treatment comprising  
administering a compound of formula (I) in claim 1.

26. The method of claim 25, wherein the weight loss disorder  
is a cachexia, aging involuntary weight loss, catabolic  
10 wasting, or anorexia.

27. The method of claim 26, wherein cachexia is cancer  
cachexia, cardiac cachexia, chronic illness cachexia, or AIDS  
cachexia.

15  
28. A method of treating a bone associated disorder in a  
subject identified as in need of such treatment comprising  
administering a compound of formula (I) in claim 1.

20 29. The method of claim 28, wherein the bone associated  
disorder is osteoporosis, bone fractures, bone formation  
associated with surgical procedures, osteogenesis imperfecta,  
hypophosphatasia, Paget's disease, fibrous dysplasia,  
osteopetrosis, myeloma bone disease, or the depletion of  
25 calcium in bone.

30. A method of treating a pain disorder in a subject  
identified as in need of such treatment comprising  
administering a compound of formula (I) in claim 1.

30  
31. The method of claim 30, wherein the neuronal disorder is  
neuropathic pain or allodynia.

32. A method of inhibiting MC4-R activity in a patient in  
need thereof comprising administering to said patient a  
pharmaceutical composition comprising a compound of formula  
5 (I) in claim 1.